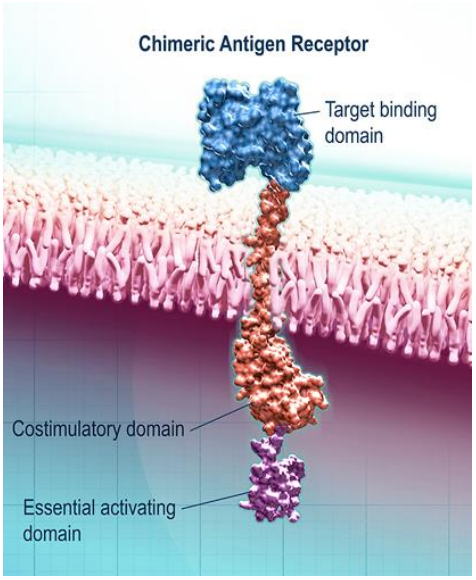
Leids Universitair Medisch Centrum

Cellular Therapies

Patients with cancer, infections or an autoimmune disease, may get a 'classical' blood transfusion. Blood transfusions are given in order to regenerate hematopoietic tissue and modulate the immune response. Currently, more specific cell therapies are being introduced. During this half minor, the clinical challenges and potential side effects of these novel cell therapies will be discussed extensively.

Introduction

Cellular therapy roughly comes in three flavours: classical blood transfusions, therapy in conjunction with hematopoietic stem cell transplantation and experimental therapies with manipulated cells. Throughout the minor you will be able to gain insight into these therapies and the immunologic mechanisms that are elicited by the conditions they are indicated for. Apart from learning these concepts, you will be challenged to delineate possible dangers, to think out solutions, to discuss ethical implications and to bring a concept forward from idea to an actual clinical study proposal or clinical trial design.



Quote

"This Half-Minor is highly academic, I learned countless scientific skills."

Overview

This half minor will first cover the clinical indications and use of classical blood transfusions that are given as supportive, but also lifesaving, treatments. Unfortunately, blood transfusions can also elicit severe immunologic and other unwanted side effects. A strong interlinked chain of donor selection and assessment, quality controls in production, donor-patient matching, responsibilities and expertise in the administration itself and recognition of (ensuing) side effects, however, can limit the occurrence and eventually also the severity of transfusion-associated side

Quote

"Teachers were so involved and enthusiastic!"

Hopes, Hurdles, Hazards...

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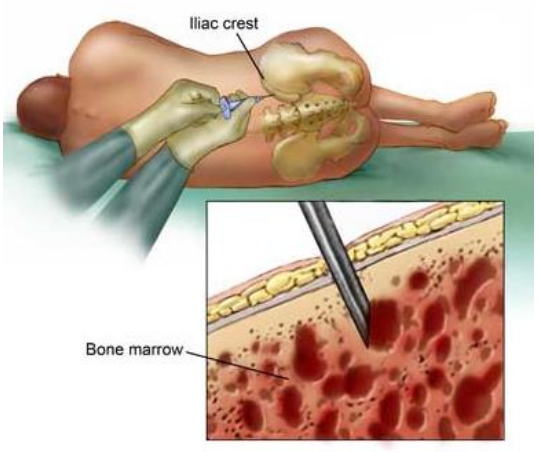

effects. Second, the minor will deal with hematopoietic tissue regenerating stem cells and the immune-modulatory capacity of donor lymphocyte therapies. These latter therapies have cured thousands of patients with hemato-oncologic diseases for many years and show evidence that regenerative medicine is feasible. Third, we will discuss the state of art of the most novel regenerative and immune-modulatory ATMPs. These therapies are on the verge of adding new and promising treatments to modern medicine.

Learning goals

At the end of this half minor, the student can analyse the symptoms and pathophysiologic mechanisms of low, deficient or dysfunctional blood, describe current therapies for these disorders and identify the risks of treatment. Students can also explain and compare the developments of existing therapies and new therapies.

Assessment

- Patient or therapy-oriented assignments (25% of final grade)
- Written exam (2x): open and MC questions (45% of final grade)
- Research project of clinical study protocol (30% of final grade)

Contact us

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